



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,036	02/27/2004	Manoj Sindhvani	TI 36774	8351
23494	7590	06/19/2008	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED			D AGOSTA, STEPHEN M	
P O BOX 655474, M/S 3999				
DALLAS, TX 75265			ART UNIT	PAPER NUMBER
			2617	
			NOTIFICATION DATE	DELIVERY MODE
			06/19/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@ti.com

uspto@dlemail.itg.ti.com

Office Action Summary	Application No. 10/789,036	Applicant(s) SINDHWANI ET AL.
	Examiner Stephen M. D'Agosta	Art Unit 2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 February 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) Notice of Informal Patent Application
- 6) Other: ____

DETAILED ACTION

Allowable Subject Matter

The examiner believes a more favorable outcome may occur if the applicant were to amend the claims as follows:

- Claim 1 + claim 11 + claim 12
- Claim 1 + claim 5 + claim 7 + claim 12
- Claim 13 + claim 11 + claim 12
- Claim 13 + claim 5 + claim 7 + claim 12

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, 8-11, 13-14 and 16-18 rejected under 35 U.S.C. 103(a) as being unpatentable over RavavilarUS 7,009,952 and further in view of Dorenbosch US 6,768,726 and Zicker et al. US 6,526,277.

As per **claims 1 and 13**, Ravavilar teaches a mobile telephone for connecting to multiple wireless networks (title and Abstract, figure 1), comprising:

a cellular module for handling a call through a cellular telephone network AND a wireless network module, operably connected to said cellular module, for handling a call through a wireless local area network (WLAN) {See figure 2 which shows an algorithm

for a mobile to operate in both cellular or WLAN modes and ability to handoff from one to the other) ,

 said mobile telephone detects a WLAN access point and loads an operating WLAN profile for said wireless network module that configures said mobile telephone to site-specific WLAN network parameters (Figure 2 teaches scanning and/or probing for both systems, eg. Scan for WWAN #222 or Probe for WLAN #211 whereby figure 2 shows "preparing for" WLAN/WWAN connection and handoff. The examiner notes that a mobile device must inherently connect/authenticate with a network whereby they receive "site specific" data from said network(s) and load it into the device.

Furthermore, Ravavilar broadly teaches connecting to multiple access technologies whereby the device must "find" said network and determine which type of network it is and then use/load the correct hardware/software, eg. load a profile, that corresponds to the specific access technology found and interface to it. Similarly, this concept can also be thought of a "simple switching operation" whereby Ravavilar's mobile device identifies and connects to the WLAN by "switching" from WWAN transceiver profile to WLAN profile);

 but is silent on wherein said cellular module and said wireless network module transmit simultaneously.

 The claim does not specify "when" the modules transmit simultaneously and thus this is open to interpretation (eg. is it at all times or only at certain times?). Hence the examiner notes that mobile devices simultaneously transmit during handoff operations.

 Dorenbosch clearly teaches a method for a mobile to simultaneously connect using two different transmitters/connections (see figure 1 showing two connections to each device, see figure 8 showing dual-transceiver device, see figure 9 which states that the two IP connections are simultaneously existing, #907 on two different access points, which can be disparate, C4, L49-65). **Note** that Dorenbosch teaches the mobile device receiving/using two IP addresses which also reads on the device loading site specific WLAN parameters into its profile, eg. Ravavilar teaches low-level scanning and detection of WLAN/WWAN parameters while Dorenbosch teaches "network layer" IP Address Parameters being determined/received and stored – see figure 9).

Furthermore, Zicker teaches a "special" mobile device that can operate both on public network and/or private networks (eg. pico-cells) when in range (Abstract, C2, L15 to C4, L30).

It would have been obvious to one skilled in the art at the time of the invention to modify Razavilar, such that wherein said cellular module and said wireless network module transmit simultaneously, to provide means for a seamless, "soft" handoff without loss of data.

With further regard to claim 13, Dorenbosch teaches support for VoIP (, C4, L67 to C5, L12).

As per **claims 2 and 14**, the combo teaches claim 1/13, wherein said profile comprises at least one of a plurality of parameters saved into a memory of said mobile phone of voice compression protocols and Internet Protocol network addresses (Dorenbosch's figure 9 teaches the device receiving/using at least two different access technologies and IP addresses simultaneously. The IP addresses must be stored in the device, eg. memory or profile, so that the data can be correctly sent to each IP channel).

As per **claim 3**, the combo teaches claim 1, wherein said profile is one of a plurality of profiles which comprise configuration parameters for a plurality of wireless networks comprising a plurality of wireless network locations (Razavilar, C2, L12 to C3, L47 and Dorenbosch C1, L15-55 teach connecting to two/multiple networks as does Zicker who teaches private/pico and public network connectivity for roaming users).

As per **claim 4**, the combo teaches claim 1, wherein said cellular module handles said calls using cellular network protocols (both Razavilar, Dorenbosch and Zicker teach cellular), and said wireless network module handles said calls on said WLAN using voice over Internet protocols (Dorenbosch, C4, L67 to C5, L12 teaches Voice over IP and video using WLAN/802.xx networks).

As per **claims 6 and 16**, the combo teaches claim 1/13, wherein, when said operating profile is loaded into said wireless network module, said wireless network module matches a network address from said profile with said WLAN, allowing said mobile telephone to transmit said call using said telephone number through said WLAN (Razavilar, Dorenbosch and Zicker teach handover and/or seamless handover which inherently requires the device to use/match the address/connection parameters such that the call is not lost or dropped. Dorenbosch teaches receiving two IP addresses which reads on using one as a "profile" to be used in a particular WLAN).

As per **claims 8-9**, the combo teaches claim 1/7, wherein the wireless network module senses broadcast signals from a plurality of different WLANs and loads one of a plurality of said profiles to configure voice over Internet Protocols for said mobile telephone that are pre-configured for each said WLAN (Dorenbosch teaches support for VoIP in a WLAN coverage area, C4, L67 to C5, L12, which reads on the claim, eg. the specific Access Point sensed will require the mobile device to "switch" to that profile such that the device can communicate with that Access Point, as taught by Razavilar and Dorenbosch. Furthermore the reception of a new IP Address reads on a "profile" since the mobile will begin to use that address for a particular WLAN. Also, Zicker teaches determining if the pico cell is in-range, eg via signal strength, and handing over to the pico-cell and/or cellular system).

As per **claims 10 and 17**, the combo teaches claim 1/13, wherein said mobile phone cannot handoff a call between said cellular network and said WLAN (Razavilar and Dorenbosch only teach handoff being possible when in-range of both WLAN and WWAN. Hence a call cannot be handed off if/when the mobile is not in an overlapping coverage area. Similarly, there is difficulty when handing off from two disparate network technologies and a call can be "more easily" dropped/lost, which also reads on the claim. Furthermore, there can be "security" requirements which prevent the user from handing off and/or network/cost constraints as well – Razavilar teaches multiple parameters to be determined such as cost, quality, BER, congestion, etc. -- The

Art Unit: 2617

examiner notes that there is no "time frame" in the claim as to WHEN the handoff can or cannot occur, hence a mobile not in overlapping coverages areas cannot handoff a call).

As per **claims 11 and 18**, the combo teaches claim 1/13, wherein, when said telephone is located in an overlapping cellular network and WLAN area, said cellular module detects said cellular network and loads a cellular module profile to configure said mobile telephone to send and receive calls on said cellular network, and said wireless network module scans for WLAN signals and matches WLAN parameters with a stored profile that configures said mobile phone to access said WLAN (see rejected claims above which reads on this claim portion since the prior art teaches roaming from cellular/WWAN to WLAN technologies and requires scanning and loading of the correct "profile" information) AND using an authorization procedure that is active on said WLAN and registers said mobile telephone with a gateway on a network connected to said WLAN (Dorenbosch teaches connecting to a "gateway", see figure 9 as well as generic authentication procedures, C1, L33-40:

Other communications systems are gaining popularity and these may be characterized as small or local area systems, often wireless, that provide services to users, typically after proper authorization and authentication procedures have been successful.

Claims 5, 7 and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Razavilar/Dorenbosch/Zicker and further in view of Zanaty and (Sjodin or Rautiola).

As per **claims 5 and 15**, the combo teaches claim 1/13, **but is silent on** wherein, when said mobile phone enters a broadcast area of a wireless private branch exchange (PBX) network, said wireless network module senses said wireless PBX and loads a profile specific to said wireless PBX which enables said mobile phone to send and receive calls using a telephone number associated with said wireless PBX.

Razavilar teaches in figure 2 the mobile unit scanning for either WLAN or WWAN networks and switching “profiles” such that the unit switches from one technology to the other, which reads on “loads a profile”. Also, the ability for a user to “roam” to/from different wireless/cellular technologies is at least known in cellular communications based on dual-mode phones (eg. have two different cellular transceivers). **Dorenbosch** teaches using VoIP whereby if a user roams from one LAN to a different LAN, a second IP address will be required/downloaded – hence a similar concept is required should the user roam into a “private” network (eg. building, office, etc.) and a “new/spoofed” cell number is used. **Zicker** teaches using either a pico-cell phone number and/or a cellular/home phone number (C4, L1-10 and/or 1-17).

Zanaty teaches a more “manual” approach to changing a phone number based on the location of the user, eg. connection is made to a computer whereby a new number is downloaded (Abstract and claims 14 and 16).

Sjodin teaches not downloading a new phone number but “spoofing/translating” by the network to support a user in a WIO whereby a “service engine” converts the user’s phone number to an “office number” so that it can be identified by private and public phone numbers (Abstract, and figures 2-3) or **Rautiola** teaches a dual-mode device using a “fake” GSM phone number while in a private/hot spot area (see Abstract and figure 2).

Hence the examiner interprets this as a “design choice” for how one would provide a “new phone number” to the user as they roam (eg. manual approach, spoofing, downloading, etc.).

It would have been obvious to one skilled in the art at the time of the invention to modify the combo, such that when said mobile phone enters a broadcast area of a wireless-PBX network, said wireless network module senses said wPBX and loads a profile specific to said wPBX which enables said mobile phone to send and receive calls using a telephone number associated with said wPBX, to provide means for changing to and using a cellular communications system via a cellular phone number (eg. either downloaded, spoofed, translated, manual, etc).

***other pertinent art is in the PTO-892 ('574, '480, '735, '772 patents)**

As per **claim 7**, the combo teaches claim 1, **but is silent on** wherein, when the mobile phone enters a home WLAN, said wireless network module senses said home WLAN, loads a profile specific to said home WLAN which configures said mobile phone for sending and receiving calls using a home telephone number.

The examiner takes **Official Notice** that "any" WLAN can be sensed by Razavilar and Dorenbosch whereby that specific network's data (eg. home WLAN profile) would be loaded.

Zanaty teaches a more "manual" approach to changing a phone number based on the location of the user, eg. connection is made to a computer whereby a new number is downloaded (Abstract and claims 14 and 16).

Sjodin teaches not downloading a new phone number but "spoofing/translating" by the network to support a user in a WIO whereby a "service engine" converts the user's phone number to an "office number" so that it can be identified by private and public phone numbers (Abstract, and figures 2-3) **or Rautiola** teaches a dual-mode device using a "fake" GSM phone number while in a private/hot spot area (see Abstract and figure 2).

Hence there is a "design choice" as to how one would provide a "new phone number" to the user as they roam (eg. manual approach, spoofing, downloading, etc.).

It would have been obvious to one skilled in the art at the time of the invention to modify the combo, such that when the mobile phone enters a home WLAN, said wireless network module senses said home WLAN, loads a profile specific to said home WLAN which configures said mobile phone for sending and receiving calls using a home telephone number, to provide means for entering "any" WLAN area/hot spot and changing over to that systems support by loading a new hardware/software profile..

Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Raaavilar/Dorenbosch/Zicker and further in view of Zhang US 6,661,785

As per **claim 12**, the combo teaches claim 1, **but is silent on** wherein, when said phone receives both said cellular network call and said WLAN call, said phone may switch between the two calls using a call waiting procedure.

Dorenbosch teaches having two simultaneous connections (Abstract, figure 9).

Zhang teaches call waiting for a user having both a VoIP and network/PSTN call (eg. connected to Internet), See Abstract and figures 2a-2c, 2d and figure 3).

It would have been obvious to one skilled in the art at the time of the invention to modify the combo, such that when said phone receives both said cellular network call and said WLAN call, said phone may switch between the two calls using a call waiting procedure, to provide means for using call waiting across the two callers (eg. cellular and WLAN/VoIP).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is found in the attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen M. D'Agosta/
Primary Examiner, Art Unit 2617